AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method comprising:

providing a first and a second fluid maintained separately from each other by a third fluid in a common, sealed vessel, wherein the third fluid is adjacent to and substantially immiscible with the first and second fluids, and wherein the first, second and third fluids are stored within the common, sealed vessel for at least one day;

unsealing the vessel;

transferring the first, third, and second fluids in series from the vessel to a reaction site to carry out a predetermined chemical or biochemical reaction; and

avoiding substantial contact between the first and second fluids, at least until after the fluids have been applied to the reaction site.

2. (Original) The method of claim 1 further comprising connecting the vessel to a device comprising the reaction site.

3. (Cancelled)

4. (Previously presented) The method of claim 1 wherein the vessel and reaction site are on a common platform.

5. (Previously presented) The method of claim 1 wherein the vessel and reaction site are integrally connected during storage of the first, second and third fluids in the vessel.

6. (Original) The method of claim 1 wherein the vessel comprises a tube.

7. (Original) The method of claim 1 further comprising applying a pressure differential across the reaction site.

8. (Original) The method of claim 7 wherein the pressure differential is provided by suction on a downstream side of the reaction site.

9. (Previously presented) The method of claim 7 wherein the pressure differential is provided by a pump on an upstream side of the reaction site.

10. (Original) The method of claim 1 wherein the first and second fluids are transferred in series to the reaction site without actuating a valve.

11. (Original) The method of claim 1 wherein the first and second fluids are transferred in series to the reaction site without actuation of any device that controls the rate, the order, or timing of introduction of either of the first and second fluids, relative to each other, to the reaction site.

12. (Cancelled)

13. (Previously presented) The method of claim 2 wherein the device is a microfluidic device.

14. (Cancelled)

15. (Original) The method of claim 1 wherein at least one of an antibody or an antigen is associated with the reaction site.

16. (Cancelled)

17. (Previously presented) The method of claim 1 wherein the third fluid is a gas or a gaseous mixture.

18. (Previously presented) The method of claim 1 wherein the second fluid is a rinse solution.

19. (Previously presented) The method of claim 2 further comprising disposing a sample in the device prior to applying the first and second fluids to the reaction site.

20-21. (Cancelled)

22. (Previously presented) The method of claim 1 wherein the vessel contains a fourth fluid, the method further comprising combining the fourth fluid and the second fluid while transferring the first, third, and second fluids from the vessel to the reaction site.

23-27. (Cancelled)

28. (Previously presented) The method of claim 1 wherein the vessel has a length to inner diameter ratio of at least 10:1.

29. (Cancelled)

30. (Previously presented) The method of claim 1 wherein the vessel has an inner diameter of less than 1 millimeter.

31. (Previously presented) The method of claim 1 wherein the vessel has an inner diameter of less than 500 microns.

32-33. (Cancelled)

34. (Original) The method of claim 1 wherein one of the fluids comprises a gold conjugated antibody.

35. (Original) The method of claim 1 wherein one of the fluids comprises a metal precursor.

36. (Original) The method of claim 35 further comprising electrolessly depositing metal at the reaction site to produce an opaque material.

37. (Original) The method of claim 36 further comprising determining light absorbance or transmission through the opaque material.

38-80. (Cancelled)

81. (Currently amended) A method comprising:

providing a reaction site;

providing a first and a second fluid statically maintained separately from each other by a third fluid adjacent to and substantially immiscible with the first and second fluids in a common, sealed vessel for greater than one minute, wherein the vessel and the reaction site are formed in a microfluidic chip;

unsealing the vessel;

applying in series the first, third, and second fluids to the reaction site; and

avoiding substantial contact between the first and second fluids, at least until after the fluids have been applied to the reaction site.

82. (Original) The method of claim 81 wherein the first and second fluids are statically maintained for greater than one day.

83-92. (Cancelled)

93. (Previously presented) The method of claim 4 wherein the vessel and reaction site are formed on a microfluidic chip.

94. (Previously presented) The method of claim 1 wherein the vessel comprises at least first and second branches that are in fluid communication with each other and with the remaining interior of the vessel.

95. (Previously presented) The method of claim 94 wherein the first branch contains a fourth fluid and the second branch contains a fifth fluid, the fourth and fifth fluids adapted and arranged to react with one another to form a sixth fluid.

96. (Previously presented) The method of claim 1, further comprising passing a sample across the reaction site prior to initiation of the transferring step.

97. (Previously presented) The method of claim 2, further comprising introducing a sample into the device from a vessel different from the vessel containing the first, third and second fluids.

98. (Currently amended) A method comprising:

providing a reaction site;

providing a first and a second fluid statically maintained separately from each other by a third fluid adjacent to and substantially immiscible with the first and second fluids in a common, sealed vessel for greater than one minute, wherein the vessel and the reaction site are integrally connected to one another;

unsealing the vessel;

applying in series the first, third, and second fluids to the reaction site; and

avoiding substantial contact between the first and second fluids, at least until after the fluids have been applied to the reaction site.

99. (New) The method of claim 81, comprising applying a pressure differential across the reaction site, wherein the pressure differential is provided by suction on a downstream side of the reaction site.

100. (New) The method of claim 81 wherein at least one of an antibody or an antigen is associated with the reaction site.

101. (New) The method of claim 81 wherein the third fluid is a gas or a gaseous mixture.

102. (New) The method of claim 81 wherein the second fluid is a rinse solution.

103. (New) The method of claim 81 further comprising disposing a sample in the microfluidic chip prior to applying the first and second fluids to the reaction site.

104. (New) The method of claim 81 wherein the vessel contains a fourth fluid, the method further comprising combining the fourth fluid and the second fluid while transferring the first, third, and second fluids from the vessel to the reaction site.

105. (New) The method of claim 81 wherein the vessel has a length to inner diameter ratio of at least 10:1.

106. (New) The method of claim 81 wherein the vessel comprises at least first and second branches that are in fluid communication with each other and with the remaining interior of the vessel.

107. (New) The method of claim 106 wherein the first branch contains a fourth fluid and the second branch contains a fifth fluid, the fourth and fifth fluids adapted and arranged to react with one another to form a sixth fluid.

108. (New) The method of claim 81 wherein the vessel has an inner diameter of less than 1 millimeter.

109. (New) The method of claim 81 wherein the vessel has an inner diameter of less than 500 microns.

110. (New) The method of claim 98, comprising applying a pressure differential across the reaction site, wherein the pressure differential is provided by suction on a downstream side of the reaction site.

111. (New) The method of claim 98 wherein at least one of an antibody or an antigen is associated with the reaction site.

112. (New) The method of claim 98 wherein the third fluid is a gas or a gaseous mixture.

113. (New) The method of claim 98 wherein the second fluid is a rinse solution.

114. (New) The method of claim 98 wherein the vessel and the reaction site are a part of a device, the method comprising disposing a sample in the device prior to applying the first and second fluids to the reaction site.

115. (New) The method of claim 98 wherein the vessel contains a fourth fluid, the method further comprising combining the fourth fluid and the second fluid while transferring the first, third, and second fluids from the vessel to the reaction site.

116. (New) The method of claim 98 wherein the vessel has a length to inner diameter ratio of at least 10:1.

117. (New) The method of claim 98 wherein the vessel comprises at least first and second branches that are in fluid communication with each other and with the remaining interior of the vessel.

118. (New) The method of claim 117 wherein the first branch contains a fourth fluid and the second branch contains a fifth fluid, the fourth and fifth fluids adapted and arranged to react with one another to form a sixth fluid.

119. (New) The method of claim 98 wherein the vessel has an inner diameter of less than 1 millimeter.

120. (New) The method of claim 98 wherein the vessel has an inner diameter of less than 500 microns.

121. (New) The method of claim 98 wherein the first and second fluids are statically maintained for greater than one day.